## SWARCOTHERM



# THERMOPLASTIC High Performance Road Markings

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SWARCO Road Marking Systems is not only a leading thermoplastic manufacturer, but we are the oldest U.S. operating thermoplastic producer. From standard government specifications to custom colors and formulations, SWARCO works with professional stripers and governement agencies to find solutions that meet performance and safety requirements. Our global experience and expertise in thermoplastics, combined with our leading edge glass bead and reflective media technology, are leading the way to brighter and safer thermoplastic markings for the world's traveling public. Our goal is not only to deliver products but provide economical turnkey thermoplastic marking systems that outperform other durable markings.





Thermoplastic pavement marking compounds have long been used on the world's highways. The long-term performance, cost benefit and wide range of application techniques provide customers an enduring marking solution while improving motorist safety.

Innovation and quality drive our commitment to making the best thermoplastic pavement marking compounds available. For example, reflectivity of up to 700 mcd/m²\*lx for white and 500 mcd/m²\*lx for yellow are achievable with our systems, and profile applications provide edge line audible warnings and enhanced wet-night visibility, to name a few.

# TYPES OF THERMOPLASTIC

Thermoplastic pavement marking compounds provide government agencies the solutions they need – from the design phase all the way through the construction phase. This ensures that the most durable and economic products are used, extending the roadway life-cycle.





### ALKYD

Alkyd thermoplastic contains a naturally occurring resin that is resistant to petroleum products which make them ideal for inner city markings and other high traffic areas where oil drippings are common. Along with being a great product for intersection markings such as crosswalks, legends & symbols, Alkyd thermoplastic is also ideal for centerline, edge-line and skip-line markings.

### **HYDROCARBON**

Hydrocarbon thermoplastic pavement markings are made from petroleum derived resins which provide heat stability and ideal application properties. Because hydrocarbon based materials are readily soluable in oil drippings, fuel and other petroleum based products, they are not recommended for high traffic areas where cars are stationary. Hydrocarbon based markings are ideal for any centerline, edge-line and skip-line applications with superior performance on both asphalt & concrete.

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# APPLICATION METHODS











### **SCREED**

Thermoplastic material is forced through a dispensing shoe that rides directly on the road surface. A continuous line is formed by a three sided die with a control gate set to a pre-determined thickness.

### RIBBON

This method of application involves using a gun that rides just above the pavement surface. Material is forced through the die and from there it flows onto the pavement.

### **SPRAY**

Spraying combines air and hot thermoplastic under pressure depositing it onto the pavement through a nozzle. The primary advantage is that striping can occur at higher speeds.

### **PROFILE**

Thermoplastic markings are constructed with an alternating elevated and recessed profile which provide nighttime retroreflectivity under wet conditions, and in cases where the profiles are large enough, a rumble effect can be felt when driving over the markings.

### **Advantages**

- Improved temperature retention in applied material
- Improves bonding/durability when material is applied in marginal application conditions
- Allows for precise thickness control

### Advantages

- Produces sharp edges
- · Easily marks rough surfaces
- Faster than screed application while still considered an extrusion process

### Advantages

- · Dries quickly
- · High application speed
- · Great surface bond

### **Advantages**

- Wet night retroreflectivity (audible/inverted)
- · Audible lane delineation

### Recommended Applications

- Centerline
- Edge-line
- · Skip-line
- Legends
- Symbols

### Recommended Applications

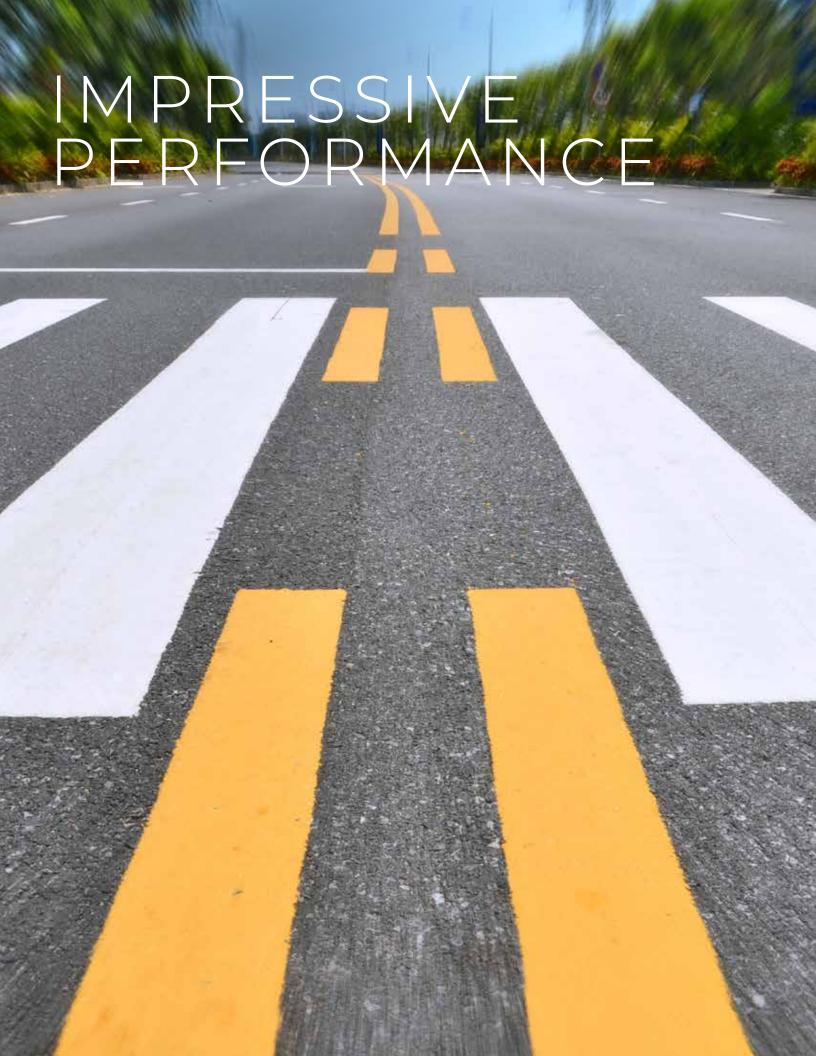
- Centerline
- Edge-line
- · Skip-line
- Legends
- Symbols
- Crosswalks

### Recommended Applications

- Centerline
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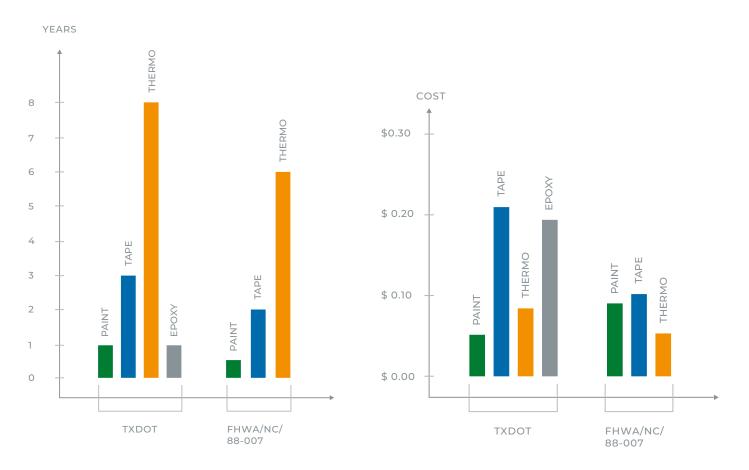




Studies have shown that properly applied thermoplastic can provide up to 8+ years of service life at 1/3 the life cycle cost of other marking binders.

### SERVICE LIFE (YEARS)

### **INSTALLED COST**



FHWA/NC/88-007: Plastic Pavement Marking Materials FHWA Project PMS000S (172): Valuation of Various Pavement Marking Materials **SWARCO** | The Better Way. Every Day.

### SHOWING THE WAY, WORLDWIDE

In 1969 we started out with the manufacture of tiny reflective glass beads. Today we have grown into the world's largest systems provider for road markings, making roads safer and saving lives on a daily basis. Our high quality products and services, safely direct traffic flow from A to B, every day and night. On all roads, in any weather, and all from SWARCO.

We prepare for the future by fusing knowledge with innovation at our Competence Center for Glass Technology and Marking Systems. So, even with smart and autonomous driving, we continue to blaze the trail of premium road markings to the world. Jump in and drive with us; we will be happy to help you find your ideal road marking solutions.

www.swarco.com/rms



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